

Volatile profile characterisation of Chilean sparkling wines produced by traditional and Charmat methods via sequential stir bar sorptive extraction

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The volatile compositions of Charmat and traditional Chilean sparkling wines were studied for the first time. For this purpose, EG-Silicone and PDMS polymeric phases were compared and, afterwards, the most adequate was selected. The best extraction method turned out to be a sequential extraction in the headspace and by immersion using two PDMS twisters. A total of 130 compounds were determined. In traditional Chilean sparkling wines, ethyl esters were significantly higher, while acetic esters and ketones were predominant in the Charmat wines. PCA and LDA confirmed the differences in the volatile profiles between the production methods (traditional vs. Charmat). © 2016 Elsevier Ltd. All rights reserved.

Chilean sparkling wine

HSSE

Polydimethylsiloxane

Polyethyleneglycol-modified silicone

SBSE

Volatile compounds

Esters

Extraction

Ketones

Microchannels

Polydimethylsiloxane

Volatile organic compounds

HSSE

Production methods

SBSE

Sequential extraction

Sparkling wines

Stir bar sorptive extraction

Volatile composition

Volatile compounds

Silicones

ketone

silicone

volatile agent

ester

ketone

volatile organic compound

Article

controlled study

discriminant analysis

extraction

immersion

sparkling wine

analysis

Chile

food industry

wine

Chile

Esters

Food Industry

Ketones

Volatile Organic Compounds

Wine